TECHNOLOGY IN BANKING – AN IMPACT STUDY IN THE OPERATIONS OF PUBLIC AND PRIVATE SECTOR BANKS WITH REFERENCE TO ANDHRA BANK AND ICICI BANK – VIZAG CITY

Synopsis of the

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SYNOPSIS

A sound and effective banking system is the backbone of an economy. The economy of a country can function smoothly and without many hassles if the banking system is not only flexible but also capable of meeting the new challenges posed by the technology and other external as well as internal factors. The importance and role of information technology for achieving this objective cannot be undermined. Technology advances have accelerated changes resulting in higher production of goods & services. The information technology has transformed the functioning of business across the world. It bridged the gap in terms of both reach and the coverage of system and in the process enabling better decision making based on latest and accurate information and improvement in efficiency through various new processes, products and services offered by both state owned banks, private sector banks and foreign banks and financial institutions.

The adoption of new technology has become a necessity for survival, particularly in the aftermath of liberalization, privatization, and globalization. Computers are not new to our country. In fact the first computer was installed as early as the 60's. The initial growth was however slow. Since 1980's there has been virtual explosion in the use of computers in both manufacturing &service sectors. The Indian Banks have been lagging behind their foreign counter-parts due to a variety reasons. In order to face global competition they had to take-up computerization on a massive scale within a short span of time. This obviously resulted in a number of changes. This study is a modest attempt in understanding how technology has impacted the banking sector.

In the present set up, Competition and Profitability have become key words for banks in India. Though these are mutually contradictory, banks have to balance the severity of the competition and continue to be in the reckoning by improving their profits. Technology has become very important for banks to carve a plane for themselves and become leaders in their respective fields; to achieve this; banks have to improve their margins and profits by conducting transactions at low costs besides being lean in size.

Indian Banking, influenced by the financial sector reforms and globalization is witnessing a shift away from meeting social priorities to the confronting market forces. The dire competition in the banking industry between the public sector banks, old private sector banks, new generation private sector banks and the foreign banks is mainly through technology innovation, up gradation and modernization.

Technology holds the key to the future success of Indian Banks. IT has a lot of influence on banking sector. The new methods of banking practices on account of IT ensure which service besides reducing cost in baking sector. Computerization in banking is taking place all over the world. The purpose of computerization is to bring technology to counter and enable to employees to have information as their fingertips. This enabled the banks to offer better quality of services to customers besides ensuring accurate information at a faster rate on banking transaction. Thus, the adoption of IT in banking has undergone several changes with the passage of time. Today, IT has become inseparable segment of banking organization.

Trends in Banking Technology:

Reserve Bank of India has played an important role in implementation of information technology in banking sector. Over the years, a number of committees have been

constituted for development of information technology infrastructure and significant developments have taken place in the banking sector. Taking into consideration the recommendations by various committees appointed by RBI and guidelines of RBI, banks have stared using IT to automate banking transactions and processes.

The trends in the technology has bought about a significant change in many aspects in the form of computerization of transactions and new delivery channels such as internet banking, phone banking ATMs, EFT, ECS and EDI etc. With migration of traditional paper based funds movements to quicker and more efficient electronic mode, funds transfers have become easy and efficient to perform. The major trends in the area of technological developments in Indian banking are as follows.

- Computerization Banking
- E-Banking
- Internet banking or Online Banking
- Mobile Banking
- Phone Banking
- SWIFT (The Society for Worldwide Inter-bank Financial Tele-communication)
- Indian Financial Network – INFINET
- Electronic Funds Transfer (EFT)
- National Electronic Fund Transfer (NEFT)
- Real Time Gross Settlement System (RTGS)
- Electronic Clearings/Settlement (ECS)
- Magnetic Ink Character Recognition (MICR)
- Debit Card

- Credit card
- Automated Teller Machines (ATM)
- Cheque Truncation System
- SPNS (Shared Payment Network System)
- BANKNET

All these developments are lead to facilities to customers delight as well as operational efficiency of banks and reducing operational expenses of banking services. All these developments in Indian banking are says that, the Indian banks are moving towards modern banking changing a face of traditional banking of Indian economy .It is grate change of banking industry. They having a installing an information technology for banking business and they trying to provide technology based banking products and services to their customers. Indian banking sector is undergoing radical transformation owing to liberalization, privatization and globalizations.

NEED FOR THE STUDY

The Indian banking industry is going through a period of intense change, where liberalized business environment has affected the banking business by way of increasing competition, rising customer expectations, shrinking spreads and increasing disintermediation.

There are different types of banks starting from public sector banks to private sector banks and co-operative banks. These Banks cater to the needs of various sections of Indian society. A number of the public sector banks focus and work in rural areas while others are mainly available in urban areas.

Opening gates to Private sector banks in India led to various liberal financial reforms and modernization of Indian banking sector. ICICI, HDFC, Axis bank are a few nicely-identified private sector banks. Private sector banks usually function in the cities and upcoming towns. With introduction to superior and better technology, user-friendly policies. Banking has turn out to be simpler and speedy. Their customer friendly policies and straightforward accessibility have made them in style and trusted amongst people. With private banks and superior technology, the banking sector has progressed to turn into faster, exact and easier.

Public sector banks largely dominate the Indian Banking industry; however, their share has been declining. Their inefficiencies came into picture only when the market competition and new glares started eating up their share. The setting up of a new companies environment has resulted in new changes for the public sector banks to retain their share. Ongoing changes in the structure of Indian banking are clearly visible. While the share of public sector banks in the total assets of the banking sector has shown a steady decline, the new private sector banks and foreign banks have succeeded in enhancing their position.

No doubt, PSBs have strong distribution network all over the country. But the strength of the earlier periods has now become a concern for these banks. As compare to the tech-equipped distribution network of the new private sector banks and foreign banks, PSBs banks have found it difficult to upgrade them on the technology front. PSBs have started embracing technology to improve customer service and design innovative products to increase sales opportunities.

In the face of growing competition, the policy changes and the operational environment in respect of the Indian banking system, there has been an increased focus on Technology is to be important on banking operations. In this regard, it is required to focus on Technology on Banking operations of public and private sector banks.

An analysis of the review of literature available on Technology in banks reveals that the work done by the research in the subject area of Technology on banking operations of public sector and private sector banks has been scant in India. Most of the research studies focused on Human resources training and development, Retail Banking, Internal Marketing on Banking, Customer satisfaction, Organizational effectiveness, Quality of work like and appraisal system in various public and private sector banks. Comprehensive comparative study on technology practices in Andhra Bank and ICICI Bank, which are public sector and private sector bank in the post liberalization period, has not been attempted by any researcher so far. This thesis analyses the banking growth vis-à-vis technological growth in the banking industry. Therefore, Technology in Banking – An impact study in the operations of public and private sector banks with reference to Andhra Bank and ICICI Bank – Vizag city made this reference.

OBJECTIVES OF THE STUDY

The following objectives have been framed for the study:

1. To trace the developments and the deployment of the technology in banking sector.
2. To examine the growth of e-transactions in general.
3. To compare the impact of technology on the financial performance of Andhra Bank and ICICI Bank in pre and post e-banking period.

4. To study the relation between technology and quality of the service with respect to Andhra Bank & ICICI Bank and to understand the preferences of the customers.

5. To analyze the perceptions of the customers and employees on the technology deployment in Andhra Bank & ICICI Bank.

Limitations of the Study:

Though the study is schematically designed. It is not without limitations. Few of the limitations are:

a) Approximating the percentages and averages to the nearest decimal point defeats the objective of the exactness.

b) Confining the study to only two banks one from public sector and another from private sector, that to in the Vizag city makes the observations not applicable universally.

c) As the study is based on the perceptions of the customers and employees human bias may creep in.

d) As the sources of secondary data vary descriptions in data reporting exist.

METHODOLOGY OF STUDY

Collection of data:

The type of research methodology is descriptive and analytical. The data collected for the study includes both primary and secondary data.

Secondary data:

The secondary data was collected from the following:

- Collection of data in RBI (Hyderabad) - Annual Reports and Bulletins, Indian Banks Association - Bulletins and Publications, Andhra bank and ICICI bank Annual

reports & publications Collection of data in Visakhapatnam zonal office of Andhra bank & regional office of ICICI Bank.

- Various journals, books, publications, articles, magazines and various e-resources

Primary Data:

The data has been collected through a well structured questionnaire and having discussion with sample respondents. In order to eclipse the customer and employee perceptions towards "Technology in Banking – An Impact Study in the operations of Public and Private Sector Banks with reference to Andhra Bank and ICICI Bank – Vizag City. Then, a comparison will be made on how the opinions of the customers and employees are connected with the evaluation of the technological services between Andhra bank and ICICI Banks.

Study population and Area:

The primary data was collected in Vizag city only because it is not feasible to collect the data universally. Vizag is a cost important city, fast growing in population, industrial development, service sector and financial sectors. Therefore, Vizag city is selected for the focus study as it is the representative of cross section of the society.

Sample Size Determination:

Selecting an appropriate sample size is a critical aspect in research with particular reference to this study. Since the banking customers and employees are so many, a sample of 500 and 200 is convincing enough for both customers and employees as a true representative and this was considered for the purpose of this study. The convincing sample method has been used for both customers and employee study.

Questionnaire Design

The questions in questionnaire were identified through the analysis of recent writings and publications from various sources of information relevant to the research topic analysed in review of literature. The questionnaire was in English. Participants were asked to express the level of their satisfaction. A five point Likert scale was used to measure all the statements (1 = Extremely Satisfied to 5 = Extremely Dissatisfied and 1= Strongly Agree to 5= Strongly Disagree).

Analysis of Data

Two types of data analysis is done.

Secondary Data: The data has been analysed with the help of annual growth rates, compound Annual Growth Rate (CAGR) and Average Annual Growth Rate using simple percentages.

Primary data: The data were entered using the software called SPSS (Statistical Package for Social Sciences) and after processing of data the required tables were generated. Chi square test, f-test and t-test were performed to test the results.

Analysis of Data means studying the tabulated material in order to determine inherent facts or meanings. So, the acquired data was given simple statistical treatment and presented in the form of tables. The interpretations of tables are given under each table with Chi square value, f-value and t-value and their significant level. The succeeding chapters of the study contain the tabulations of data, analysis and their interpretation.

PRESENTATION OF THE STUDY

The study is presented in VIII Chapters.

Chapter I is the introductory chapter which provides an insight into the adoption of technology in banks, the e-banking process, need for undertaking the present study, objectives, limitations and methodology.

Chapter II presents the comprehensive review of the literature on Impact of technology on banking operations, the paradigm shift in Indian Banking – changes, trends, challenges, Service quality concept, Customer satisfaction and Employee satisfaction on technological services etc.

Chapter III provides a comprehensive discussion of the theoretical background that pertains to the premise of the study impact of technology on banking operations.

Chapter IV gives a brief overview of the profile and IT services of Andhra Bank and ICICI Bank.

Chapter V compares the financial performance of Andhra Bank & ICICI Bank in pre and post e-banking period.

Chapter VI deals with the perceptions of the Customers regarding the technological operations of banks service quality in Andhra Bank and ICICI Bank.

Chapter VII deals with the perceptions of the employees regarding the technological operations in Andhra Bank and ICICI Bank.

Chapter VIII presents the summary & suggestions of the study.

Summary of Findings:

This thesis is a survey of public and private bank customers and employee's responses towards technological services of banking. The objective of this analysis is to measure the customers and employees' awareness, perceptions, and the level of satisfaction with regard to Technological Services offered by the branches of the Andhra Bank and ICICI Banks in the Vizag city.

The Perceptions of Customers:

The perceptions and experiences of the customers on the technology deployment in Andhra Bank and ICICI Bank are analyzed. This is to focus light on different corners and operational dimensions of banks in technology era. The researcher has designed a customer satisfaction model on service quality.

In this conceptual model, According to Yi (1990) customer satisfaction is defined as "a collective outcome of perception, evaluation and psychological reactions to the consumption experience with a product/service". According to Bitner et al. (1990) the service quality defined as "the consumers' overall impression of the relative inferiority/superiority of the organization and its services. The relationship between customer satisfaction and technological services are analyzed in this model. Service quality is a well-known instrument, called SERVQUAL. Based on literature review the researcher considered the service quality dimensions identified by different authors to test the technology services in banking sector to improve customer satisfaction for which SERVQUAL instrument is used.

Therefore, the service quality is dependent on customer's perceptions of the service. Using the service quality instrument (SERVQUAL), customer satisfaction level in terms

of technology and service quality an impact study in the banking operations is undertaken. The factors that are influential have been identified through the statistical techniques of t-test.

Under **SERVQUAL** Dimensions it can be concluded that Andhra Bank customers with a mean of 38.65 have a better opinion about satisfaction level of **tangibility** by their respective organizations when compared with ICICI Bank customers mean of 36.16. The t-value is 5.53** found significant at .01 level. Andhra Bank customers with a mean of 30.51 have a better opinion about satisfaction level of **reliability** offered by the bank institutions when compared with ICICI Bank customers mean of 28.64. The t-value is 4.42 not significant. Andhra Bank customers with a mean of 49.68 have a better opinion about **responsiveness** offered by the bank when compared with ICICI Bank customers mean of 47.53. The t-value is 3.47** found significant at .01 level,

Andhra Bank customers with a mean of 15.39 have a better opinion about satisfaction level of **assurance** when compared with ICICI Bank customers mean of 14.18. The t-value is 5.09* found significant at .05 level. Andhra Bank customers with a mean of 15.62 have a better opinion about **empathy** offered by the bank institutions when compared with ICICI Bank customers mean of 14.18. The t-value is 5.94** found significant at .01 level. Andhra Bank customers with mean of 18.82 have a better opinion about satisfaction level of **efficiency** offered by the bank institutions when compared with ICICI Bank customers mean of 17.42. The t-value is 4.78** found significant at .01 level.

Andhra Bank customers with a mean of 11.74 have a better opinion about **Accuracy** offered by the bank when compared with ICICI Bank customers mean of 11.32. The t-

value is 2.63** found significant at .01 level. Andhra Bank customers with a mean of 15.34 have a better opinion about **security** offered by the bank when compared with ICICI Bank customers mean of 14.83. The t-value is 4.24** found significant at .01 level. Andhra Bank customers with a mean of 11.63 have a better opinion about **Easy and convenient banking** offered by the bank when compared with ICICI bank customers mean of 10.96. The t-value is 2.05* found significant at .05 level. Andhra Bank customers with a mean of 14.82 have a better opinion about **Customer Service** offered by the bank when compared with ICICI Bank customers mean of 13.94 The t-value is 3.03** found significant at .01 level.

It can be concluded that both the customers of Andhra Bank and ICICI bank have attained customer satisfaction based on the SERVQUAL model with respective technological operations.

Thus it can be inferred that the perceptions and experiences of the customers on the technology deployment in Andhra Bank and ICICI Bank was in favour of up gradation of technology. The different types of demographic customers opined that both banks are technologically upgraded. With the liberalization banks of all types are on race to increase their customer base with new innovative technological products and services. It can be said that public sector banks are at their highest level of hard work to give competition to the private sector banks. It is seen that to retain the existing customers and attracting new customers the public sector banks like Andhra Bank is providing up to date services to its valued customers as they are primary input to the profitability of the bank.

The Perceptions of Employees:

The employee perceptions analyzed the opinions of employees on technological operations through different aspects and density of satisfaction levels with a comparison of Andhra Bank and ICICI Bank.

The researcher has designed a employee satisfaction model on service quality. In this conceptual model, the study measures the employee satisfaction levels on e-banking service. The relationship between employee satisfaction and e-banking services are analyzed in this model. Overall satisfaction has been taken as a dependant variable and various other factors like collaborative culture, behavior, training & development, knowledge management, are considered as the independent variables. The factors that are influential have been identified through the statistical techniques of t-test.

The **Employees Satisfaction on Technological services** can be concluded that **t**he average perception of **collaborative culture factors** by the experiences of ICICI Bank employees with mean of 11.64 found to be highest than Andhra Bank employees with mean of 10.65. The t-value is 4.11** found significant at .01 level. The average perception of **behavioral factors** by the experiences of Andhra Bank employees with mean of 21.45 found to be highest than with mean of ICICI Bank employees 21.32. The t-value is 0.25 not significant.

The average perception of **training and development factors** by the experiences of Andhra Bank employees with mean of 19.93 found to be highest than with mean of ICICI Bank employees 19.72. The t-value is 0.44 not significant. The average perception of **knowledge management factors** by the experiences of ICICI

Bank employees with mean of 27.08 found to be highest than Andhra Bank employees with mean of 25.16. The t-value is 3.27** found significant at .01 level.

It can be concluded that Andhra Bank has attained overall satisfaction of employees with respect to behavioural and training development factors based on employee satisfaction model in e-banking services. And, ICICI bank has attained overall satisfaction with respect to collaborative culture factor and knowledge management factor based on employee satisfaction model in e-banking services.

Thus, It can be inferred that the **perceptions of the employees** of both ANDHRA and ICICI BANKS are in line with the banks vision of profitability with increased customers' satisfaction in a user friendly environment. The employees are highly motivated to take up challenges of technological up gradation with the attractive incentive packages though there are stressful long hours of work. They opted that a regular training and development programmes are to be given to increase their knowledge about the upcoming new technological services that are to be offered by the respective bank so that they can educate and help the customers while transacting. Comparatively Andhra Bank a public sector bank is giving greater customer satisfaction than ICICI bank a private sector bank.

Suggestions

Several meetings with the customers and employees of Andhra Bank and ICICI Bank and an analytical study has given a fair idea as to the work ability of technology in banking, the pros and corns of its applicability in the day to day life, its shortcomings due to technological and human factors. The following suggestions are made

1. Trust: The cyber dons must be caught and given severe punishments to deter prospective dons from doing the crimes and also to instill trust, confidence, and feeling of genuineness in the customer.
2. Security: To increase the security for ATMs it is advised to share the security guards by establishing group ATMs, as one or two guards may not face the dangers.
3. ATM: It is suggested that the limit of (1) number of transactions and (2) maximum withdrawal of cash in case of Andhra Bank must go to make the customers feel truly happy.
4. Credit cards: Number of complaints against credit cards is high from customers and there is high accumulation of bad debts in the bank's balance sheet. It is suggested that the managements take a tough and appropriate decision.
5. Lower Cost: It is suggested that banks reduce the service charges for their products and services offered to a minimal low as large number of banking activities naturally provide a fairly larger share of income.
6. Ease of Use: Literates are also finding it difficult to operate internet banking and ATM machines. Banks must take the initiative to consider conducting of practical training sessions for educating customers at their branches, on the usage of internet banking interface and ATMs
7. Mobile ATMs and Mobile Banks: It is becoming increasingly expensive to open new branches and new ATMs. So banks can expand their e-banking hands into towns and rural areas in the form of mobile ATMs and mobile banks.

8. Fraud: Ultra tech cyber criminals are now a days, are daringly using their sixth sense techniques to transfer large amount of cash into some account or secretly transfer valuable and vital technical and business information causing unbearable loss to the customers, banking managements and also to the government. Therefore bank must do their best to educate and warn its customers.

9. It is suggested that the government to assimilate modern technology of networking system, it should eliminate the blocks to a 24x7 supply of electricity which is the key element.

10. Employee Behavior: from this study it is crystal clear that the customers are less satisfied with the behavior of bank employees. It is suggested that every bank pay more attention to increase the communication skills of the employees.

11. Preventive measures: there are some complaints that networking system of the e-bank are getting stalled due to virus, hacking and some other technical reasons. Therefore, the banks must take all the steps and precautionary measures to prevent such incidents from recurring again and again.

12. Accuracy: Bank customers must realize that accuracy in filling the requisite forms saves them from the hassles of heart burn. Double checking and verification is a must for both bankers and customers and the latter can be called on phone or via other methods.

13. Upgradation of technology: As regular upgradation of technology is very costly and hence, banks are advised to enter into partnership among themselves for reaping maximum benefits through consultations and coordination's with reputed information technology companies.

14. Educating customers: Banks must seek the financial cooperation of corporate giants to conduct road shows and occasional classes to educate customers with different educational, cultural, age, health, social and ethical backgrounds to efficiently use the banking services.

15. Cooperation of employees: recommendation from one colleague to another regarding usefulness of a particular process, can be more powerful. Cooperation coordination

16. Cooperation among Banks: Though there is cut throat competition among banks it is recommended that a fair degree of cooperation among the employees will greatly benefit all the banks. For example an ATM placed a centralized location may be shared by many banks which will simplify operational abilities and be cost effective. Network sharing is also recommended through strategic alliance.

17. Knowledge of Employee: There is a general lack of knowledge or skill to handle sophisticated level of technology, therefore management should introduce compulsory training programs, so that there is perceptible change in their knowledge to handle more complex procedures of e-channels.

18. Priority of preference: Banks must take steps to see that veterans, sick people, Pregnant Ladies and disabled are sent home quickly by giving them first preference in the banking work, irrespective of their time of arrival.

19. Utility of internet banking: It seen that from the study that the internet usefulness has a positive influence on its use. Therefore internet banking acceptance would increase when customers find it more useful. Banks should plan marketing

campaigns to increase consumer awareness would result in better acceptance of internet banking.

20. Mobile Banking: The new banking application is loaded onto the SIM card of the mobile and alters the handset menu. The customer gets a banking option on the mini browser menu with access to the basic services like Balance enquiries, change PIN, Statement, Payment, Transfer and Activate/ Register.

21. Suggestions to customers: It is advisable to type correct URL into the browser and long off immediately after the online banking session and keep changing the passwords at regular intervals to avoid clandestine copying. The passwords must be so, that it is difficult and complex to make a duplicate and dupe the customers. Never share them with any person.

22. Suggestion for Public sector Banks: Some of the out dated and impracticable rules and regulations of public sector banks are still testing the patience of the customers and forcing them to search for a possible alternative. Unless and until the banks discard rules that are a hindrance to the smooth functioning of routine bank work, people may be forced to knock the doors of private banks.

23. Suggestion for Private Sector Banks: it would be better for private sector banks to reduce hidden charges and higher rates of processing fees collected on various banking activities.

24. Bio Metric ATMs: As India has around fifty percent of illiterates, it is advised to ICICI Bank to open biometric ATMs.

25. Recruitment: Andhra Bank is advised for recruitment so that allowing young blood into the stream will help reduce the burden on the senior employees.

Thus it can be concluded that both ANDHRA and ICICI BANKS are in line with the banks vision of profitability with increased customers' satisfaction in a user friendly environment. The employees are highly motivated to take up challenges of technological up gradation with the attractive incentive packages though there are stressful long hours of work. They opted that a regular training and development programmes are to be given to increase their knowledge about the upcoming new technological services that are to be offered by the respective bank so that they can educate and help the customers while transacting.